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GAS JOURNAL
Established 1859 Pioneer of the Gas Industry

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Smithsonian Deposit

Gas Cannot Flow Unless Lighted

Both the Gas Company and the Gas Appliance Manufacturer can realize to the fullest extent the significance of this feature of the ASAC Automatic Safety Pilot Control.

Before the greatest gathering of Gas Engineers and Appliance Manufacturers in this country and Canada, the ASAC has proved its positive action and reliability under the most exacting tests, and won their highest praise.

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REMOVES THE LAST OBJECTION TO THE USE OF GAS

Write to us *at once* for literature telling how this device accomplishes this.

AUTOMATIC SAFETY APPLIANCE CORP.

53 PARK PLACE, NEW YORK CITY

Eastern Agents for Claus Automatic Gas Cock Co.

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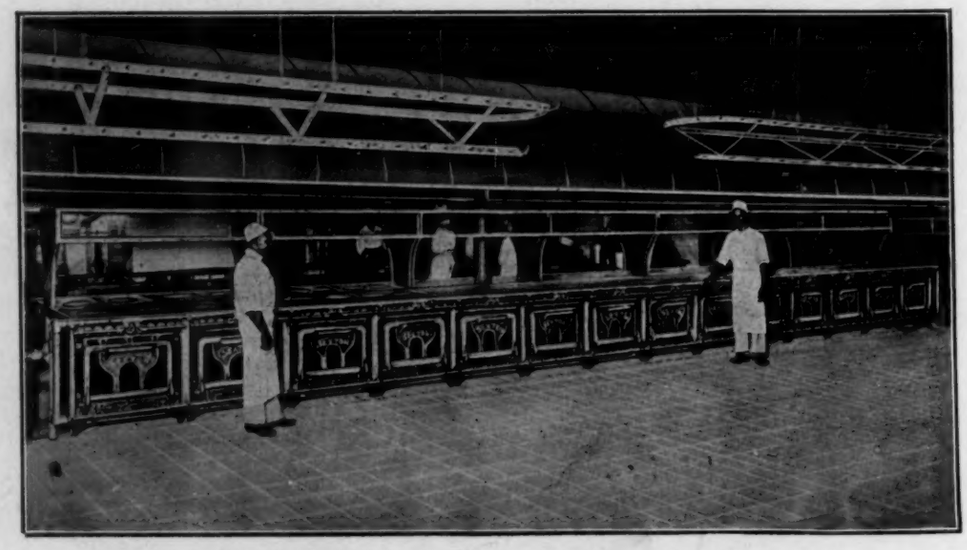
U. S. NAVAL ACADEMY USES SEXTON PATENTED HOTEL GAS RANGES



View of an unusually large battery of Sexton Ranges in use at the U. S. Naval Academy, Annapolis, Md.

The installation shown above is another instance which demonstrates the high regard in which SEXTON HOTEL RANGES are held by leading institutions.

SEXTON PATENTED HOTEL GAS RANGES embody all the usual good features, and in addition have several improvements which are patented and exclusive. The most important of these are the Central Gas Control and the Counterbalanced Oven Door.

The Sexton Patented Central Gas Control is not only easier to operate but also makes possible greater economy in the use of gas.

The Sexton Counterbalanced Oven Door has equal advantages. Experience has shown that springs are unsatisfactory, so the Sexton door is operated by a well designed counterbalancing device. This makes the door unusually easy to open and close and provides even pressure in all positions.

The high quality of SEXTON HOTEL RANGES combined with their exclusive advantages make them the inevitable choice of hotels and institutions that want the very best in kitchen equipment.

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The T. G. Arrowsmith Co., Pacific Coast Representative
135 Montgomery St., San Francisco, California

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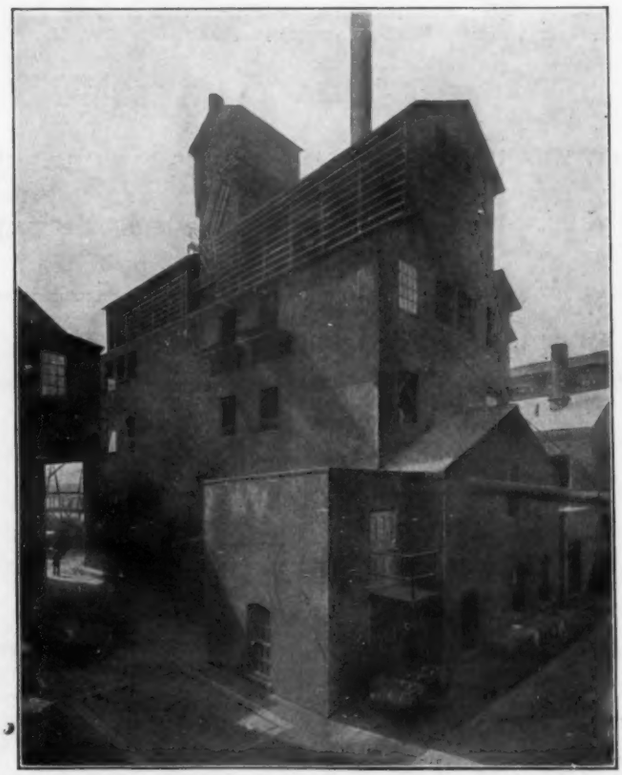
Vertical Retorts

1911 FITCHBURG MASS.



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American Gas Journal

SIXTY-SEVENTH YEAR

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GAS JOURNAL

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Incineration*

The use of gas in destroying refuse--An undeveloped field

J. B. Prescott

The Pyrofuse Incinerator Company

THAT the necessity for the removal and destruction of waste has existed in populated sections of the world for ages goes without saying. We are told that traces of vast heaps of matter which was nothing more or less than garbage and waste were unearthed some years ago at Pompeii and Herculaneum. But a few weeks ago it was reported in the daily papers that great piles of the same material had been uncovered during the recent excavations in Arizona.

Unquestionably this problem has existed in a more or less acute way during the lives of all cities, and especially where population is dense. It is said that no other subject involving health and physical welfare has so troubled city officials and health boards as the disposal of what is commonly known as garbage.

The thoughtless citizen has frequently endeavored at least to dispose of it in the street or has left it in his back yard until his neighbors rebelled, or he has burned it in his range or heating furnace and then has had more trouble with his neighbors. He has mixed it with ashes and other more or less burnable refuse and has finally had it taken to some vacant lot or depression in the land, and dumped there. The lot or depression fills up finally and then becomes offensive to everyone near by.

Public Incineration

As a community grows the necessity for some definite action grows with it until in many towns or small cities the subject of a public incinerator is advanced and decided upon for, however complete the accomplishment really is, the consensus of opinion is that total destruction by fire is the most desirable method of disposal.

We might say, therefore, that today everyone recognizes the importance and urgent necessity of the sanitary disposal of waste matter of all kinds. The evils of the garbage can are too well known to require much discussion. Waste matter not taken care of—allowed to exist—is at once a nuisance and a menace to health, increasing in danger proportionately with age.

To cover it up or bury it is but a subterfuge, a temporary expedient that is neither safe nor sanitary. Garbage decomposes rapidly in the open air and becomes offensive, especially in warm weather. When left on the ground it furnishes a breeding place for countless insects, contaminates sources of water supply and becomes a menace to public health.

Absolute Destruction Essential

Absolute and complete destruction is therefore the only synonym for disposal as applied to garbage and waste matter. Of the many municipalities which have made strenuous and costly efforts in the wholesale collection and destruction of garbage, some have had fair success, but many have been nearly complete failures and not a single one that we know of but leaves its trail of health menace, daily nuisance and never-ending trouble.

The garbage can in its least repulsive form is a thing to be shunned, while the unclean and offensive yet autocratic garbage man we naturally seek to avoid.

The first public garbage destroyer of which we have record was built in the United States in 1884. Lieutenant Reilly constructed this pioneer incinerator on Governor's Island, New York Harbor. It

*Read before the January meeting of the New England Association of Commercial Gas Managers.

was a crude affair, with but few features of permanence, yet it served the purpose of burning waste material for quite a period. Coal was used as fuel. During the next 25 years a good many coal—and coke—burning destroyers were tried out, and some of them used for a longer or a shorter period. Most of these were used by cities and large institutions.

Over a period of 20 years, during the eighties and the nineties, it is recorded that some 94 per cent of our cities gave little or no attention to the betterment of garbage disposal methods, simply filling in low land or, in remote instances, feeding less offensive waste to hogs.

It is thus seen that it is only during the last 25 years that this problem has received any part of the consideration of which it is deserving. A great many cities on the waterfront load this material into scows and tow it miles out to sea, there dumping it overboard, but of late years, with the development of seashore resorts, this method has become a nuisance and a menace to health, especially to those who have residences along the shore.

Troubles with Municipal Incinerators

Many municipal garbage incinerators which are designed to meet the needs of individual cities are now being employed but they are far from being perfect and in many instances throw off odors which under certain conditions of wind and weather become a nuisance, even though the incinerator is a long way from residential communities.

With this plan, also, goes the garbage can, the garbage man, and all the attendant evils tolerated by people because nothing better has been developed.

Does this method of disposal satisfy, in a sanitary and practical way, the wants of a community? Many, very many, have said and are constantly saying that it does not and simply because no municipal plan has ever been devised, or do I believe can be devised, that will not have serious evils and nuisances attending it.

Because the very existence of garbage, uncared for, represents a menace to health, and because of the very character of the work, necessitates the employment of objectionable people whom no one wishes on his premises. I have been told by very many people with whom we have had occasion to discuss the matter of waste disposal that the tipping system has gotten to be quite general among garbage collectors in very many places. One superintendent of quite a small hospital recently told me that he paid to the driver, a city employee, who collected his waste material, four dollars every week.

Strike of Garbage Men Always Possible

But a few years ago the entire city of New York was placed in an almost unbearable condition by the strike of 5,000 garbage men, which completely tied up the collection of all kinds of waste. For weeks and months great heaps of material could be seen practically all over New York City, and had not cold weather intervened it is estimated that serious consequences in sickness and death would have resulted.

It is because of such conditions that engineers and manufacturers were stimulated to devise ways and methods of waste destruction for the individual home and institution. During the past 13 years quite a number of household incinerators have been put upon the market. Naturally these vary according to the design, material and workmanship that is employed in each case, and particularly in proportion to the degree that the manufacturers themselves have realized the importance of the whole matter and in proportion to their knowledge of the extreme requirements involved in the severe service that an incinerator is called upon to perform.

It is generally conceded that the best possible agent that can be employed to develop the necessary heat in a household or institutional incinerator is artificial or natural gas.

(Continued on page 79)

Burn Refuse with Gas

Save trips outdoors in cold weather.
Dispose of all refuse quickly, cleanly.

The Gas Incinerator, long used by hotels, restaurants and institutions, has been perfected for home use and will overcome completely the distressing problem of waste disposal—table scraps and all kitchen refuse.

The Gas Incinerator burns up everything, without odor. No trips outdoors to the garbage bucket. No unsightly accumulation in the kitchen or on the back porch.

The Gas Incinerator, in certain styles, also provides welcome heat in the kitchen in cold weather, especially on these frosty mornings before the furnace is started.

Easy term payments if desired. Come in and let us show you the type of incinerator that will best fit your needs and kitchen space.

(Your Name and Address)

"YOU CAN DO IT BETTER WITH GAS"

A.G.A.-481

Advertising an Important Use for Gas

Advertising Gas

An instance of interesting propaganda at the right time

John H. Hartog

Portland, Oregon

ATTENDING Portland's leading theater, while on the Pacific Coast, I noticed a half page which apparently would add some information to the rather meagre synopsis of the play. As I read along, it dawned on me that I was perusing some propaganda in my own line of business, the gas business.

Having nothing else to do between acts, not even a neighbor to talk to, I glanced over the audience below me and watched them with the sinister purpose of convincing myself that propaganda disguised as news might be a boomerang.

To my surprise, I noticed that, as the people would turn the leaves of their program, they would invariably stop and read the page I referred to, which even at a distance was quite recognizable, through its conspicuous heading.

What Was the Effect?

Then came the question; What effect did it have, good or bad? Well, I saw, among other instances, a young couple giggling over something in the ad. and as he kept running his fingernail over a line near the bottom, I saw in my own copy that he was pointing at the item about "a Radiantfire to . . . warm her back or toast her toes . . ." Again and again these young lovers or newlyweds were enjoying this paragraph. Finally they subsided.

In a few moments an elderly lady, evidently mother to one of the two youths, said something to the young man, and he promptly engaged her in conversation about the ad., again pointing to it and running his finger tip along that paragraph.

This interesting experience and the fact that the entire audience, as I beheld it from my front seat in the first balcony, stopped to read the article, decided me to write to the gas journal about it to suggest that other gas companies might well use the same idea as originated out there on the Pacific Coast.

The play I attended was "Blossom Time," but I secured two more programs from the same theater, showing that this evidently is the custom of that utility out West.

A Good Time to Get Attention

It certainly is the logical moment to get a reader's attention, for no space of time is harder to fill than the gap between acts. Since we have no excuse for leaving the theater, as there is no foam to "blow off," we stay in our seats and even though we may have an interesting companion conversation soon flags and running through the program becomes the favorite pastime, hunting for something that will breathe on the dying conversational embers and revive the flame till the orchestra files back into its seats and the waiting spell is over. Here are the three ads.:

TOO MUCH CHARLESTON?

Some say there is. Others say there can't be too much. But the question is: aren't we living at too fast a pace—isn't our hard-earned money going for the froth and jazz of the present day? Aren't we penny-wise and pound-foolish, by spending our money for bubbles, dancing even as we eat and burning the candles at both ends?

Look at the average budget of today:

Bottle of French perfume, advertised in the papers.....$28.00

Cheaply constructed cookstove, advertised in the papers..... 27.75

The perfume a luxury that vanishes, the stove a part of your home that ought to last for ten years!

Or take one young man's list or purchases:

Automobile $825.00
Piano 575.00
Radio set 225.00
Cookstove 39.95

And yet it is said that "the way to a man's heart is through his stomach," but with a poor cookstove it's going to be a hard, difficult road for friend wife. She is entitled to the best, the quickest, the cleanest, the handsomest . . . and that is the new "Smoothtop" sold by the Gas Store at Fifth and Alder.

WAS CAPPY RICKS REAL?

Not all know that the character of Cappy Ricks is not all imagination, but based on a real flesh-and-blood he-man whose name itself is said to sound like money and who has achieved fame out here on the Coast in the steamship business.

"And what does S. S. stand for," asked little Katie, as she read the name on the prow of one of the Dollar line Steam Ships, "does it mean Sunday School, mother?"

Even so, some think that S. T. stands for Smooth Top when it is short for Steam Transportion. It shows how the public mind becomes impressed by anything that is successful and talked about, so successful that every woman either has one, is going to get one or would like to get one. Xmas is the time to fulfill her wish. Or if she has one, let the Gas Company deliver a handsome Radiantfire, an Easy Washer, or a Simplex Ironer. You can't go wrong by doing so and the present will last all year and many years to come.

(Continued on page 76)

Harvey's Union Station Layout a Triumph*

Famous caterer effects beauty and speed in mammoth operation

THE world sure has moved. If you ever ate a meal in the old Chicago Union Station, and then took a trip through the kitchens, the lunch rooms, the cafeterias and the dining rooms that are run by Fred Harvey in Chicago's corking new Union Station, you would quickly second the motion.

You will be interested in the way Fred Harvey operates, and to know why and how they serve the thousands upon thousands of travelers who rush in and out of Chicago, you must know some of the equipment behind the food.

The pictures herewith give you a line on the beauty and convenience and modern touches in the eating places in the Union Station.

Speed in Modern Lunch Room

The first of these which meet your eye is the lunch room at the west end of the first floor. The eye of the hotel or restaurant man will speedily light on the high marble counter under which is installed the system for disposing of used dishes. Imagine a dumbwaiter effect, endlessly moving, the continuous chain being equipped with racks on which the trays of used dishes may be slipped for lowering to the dish washing room below. Arriving at the bottom of its travel, the tray of dishes moves out on an endless belt, where the dishes slide out onto a large receiving table before being placed in the steam dish washing machine.

Eight Sections of Gas Ranges in This Service Kitchen

The restaurant man will next notice that the lunch counters are the height of the ordinary table, and that the stools are chairs with backs placed at a height which enable the diner to keep his feet on the floor.

After looking at the photograph of the dining room, you will want to know more about its furnishings.

Ranges Grouped as Service Demands

Then let us go back to the kitchen—not the manufacturing kitchen, mind you—but given over mostly to short orders. This kitchen is a masterpiece in arrangement. In the first place, the eight sections of hotel range are not all grouped together, but are found in units of two each at four different places in the long kitchen. This separation of range units, to promote speed and volume, is notable in all the Fred Harvey kitchens, showing their scientific arrangement. On a high shelf over each unit is a gas-fired salamander, and there is a refrigerating unit between each two sections of range. At either end there is also a short order equipment.

One of the interesting things is that the coffee urns are placed against the wall nearest to the lunch room, and the spigots from these urns protrude through the wall into the lunch room, enabling the waitress to draw off the coffee for each order as she comes out of the kitchen with the order.

Steam Tables and Ranges on Platforms

Please note also that the steam tables and ranges are on platforms, so that when the floor is washed down the water will run away from the appliances.

Pantry Placed for Service

At the north end of this kitchen there is a compartment for cold meats, with meat blocks, cooling tanks for dressing, and so on. Between the lunch room and the kitchen also is the pantry where the pastries, ice creams, relishes, etc., are prepared. The position of this pantry is such as to effect great convenience in service, both with respect to the lunch room and the kitchen.

You note tile on the kitchen walls everywhere you go—immaculate white glazed tile on the walls and a red tile floor. There are special gas-fired broilers in different parts of the room.

"Cooking in Volume" Done Here

If you want to see how food is prepared in volume, let us go down to the lower floor or basement, where

(Continued on page 82)

*From "Cooking in Volume," issued by the Peoples Gas Light & Coke Co.

GAS MERCHANDISING

Domestic – Industrial

Ideas for the Man Who Sells

William H. Matlack

DISPOSING OF RECOVERED AND SHOPWORN APPLIANCES

INVENTORY time, whether it falls on January 1 or some other period during the year, always uncovers a lot of appliances that, by reason of their having been used as floor demonstrators in the store or because they have been exchanged and recovered for non-payment, are set down on the inventory sheet and charged into stock as "second-hand appliances." These "second-hand appliances" are sometimes carried for a year or two and finally sold for "most anything to get rid of them."

This policy of disposal has several features that can be called only poor merchandising. Every appliance carried in stock, either in the wareroom or in the shop, takes up floor space. Therefore a portion of the rental cost is chargeable to it. Aside from this, there are the other charges, including clerical cost and cleaning. Furthermore, a certain depreciation cost should be marked against the appliance. Hence the longer these "second-hand appliances" are carried on the books and cared for, the greater becomes the loss. Few companies up to this time have made any systematic attempt to dispose of these appliances with an even break, cleaning up their warerooms and closing the account. Still fewer have made any attempt to move them at a profit.

Pre-Inventory Sale

The Illinois Power and Light Corporation, East St. Louis, Illinois, seems to have solved the problem. This company's inventory time happens to come at the first of the year and this year the management decided that the thing to do was to stage a big pre-inventory sale and rid the storeroom and the 1926 inventory sheet of all used appliances. The

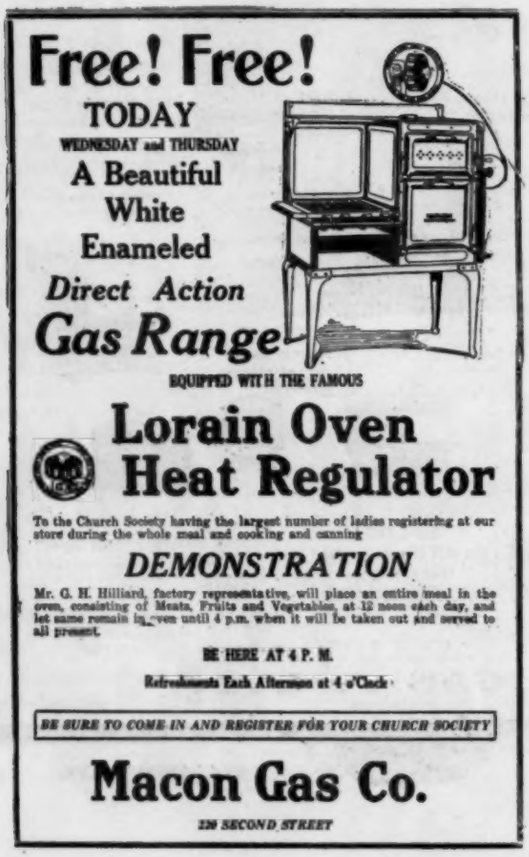
Your Charge Account With Us Makes Saving Easy During This Sale
PRE-INVENTORY SALE
Save $5 to $75 On Guaranteed Home Appliances
LIBERAL ALLOWANCE FOR YOUR OLD RANGE OR WATER HEATER
We show below many appliances that have been used for display purposes or slightly used otherwise on which you can save from $5 to $75. Please remember that each and every appliance offered during this Pre-Inventory Sale, regardless of price, is in perfect condition and looks the same as new and bears our unqualified GUARANTEE. Make this resolution now—
Resolved, That my wife shall spend less time in the kitchen, yet prepare better meals, that she shall have an abundant supply of Hot Water and that she shall no longer be troubled with cold rooms. She can have all of these things if you supply her with MODERN GAS APPLIANCES.
Jiffy Gas Water Heater
Only $1.50 Down
Balance in Easy Payments
Clark Jewel Gas Range
Only $2.50 Down
Balance in Easy Payments
Quick Meal Standard Gas Range
Only $10 Down
Balance in Easy Payments
Lion Storage Type Gas Water Heater
Only $10 Down
Balance in Easy Payments
Automatic Thor Ironer Gas Heated
Only $9 Down
Balance in Easy Payments
Thor Washing Machine
Only $7 Down
Balance in Easy Payments
Radiant Gas Heater
Only $2 Down
Balance in Easy Payments
10% Off
On All Clark Jewel Gas Ranges
The Reliable "Hot Spot"
Only 95c Down
Balance in Easy Payments
Phone for Our Representative or Call at Our Office
YOUR GAS COMPANY
PHONE BRIDGE 1041
414 MISSOURI AVE.

first shot in the sale was a full-page, clean-cut advertisement, announcing the sale and stating just what was being offered. This advertisement was run in the Sunday issue of a local newspaper and by noon on Monday sales were going over big in circulating water heaters. The company sold every heater in the warehouse and all those hooked up in the store for display purposes. The sale as a whole was a success and the management attributes it to the fact that as soon as the sale was decided upon each and every appliance was given a careful inspection and put into salable condition. As soon as the advertisement appeared it was put on the sales floor in order that the customer could see exactly what he was buying. Appliances were all marked in plain figures with the regular price and the sale price, together with the terms of payment.

A REGISTRATION CONTEST

ANOTHER sales idea that is a good one is that used by the Macon, Georgia, Gas Company. This company held a week's demonstration at which everyone attending was required to register and, to swell the attendance, "a beautiful white enameled gas range was given free to the church society having the largest number of ladies registered at their store during any demonstration."

In conducting a demonstration of this kind it is well to secure lists of church and other societies and to mail to each member an invitation together with an announcement of the fact that the society having the largest attendance would be presented with a gas range free. This idea should then be followed out by 'phoning one or two of the most active workers of each society the day preceding the opening of the demonstration and asking them to co-operate with you in getting their members to the demonstration. The registration cards should be checked against the regular customer-history cards and all that look like live prospects turned over to salesmen to be followed up immediately.


Free! Free!
TODAY
WEDNESDAY and THURSDAY
A Beautiful
White
Enameled
Direct Action
Gas Range
EQUIPPED WITH THE FAMOUS
Lorain Oven
Heat Regulator
To the Church Society having the largest number of ladies registering at our store during the whole meal and cooking and canning
DEMONSTRATION
Mr. G. H. Hilliard, factory representative, will place an entire meal in the oven, consisting of Meats, Fruits and Vegetables, at 12 noon each day, and let same remain in oven until 4 p.m. when it will be taken out and served to all present.
BE HERE AT 4 P. M.
Refreshments Each Afternoon at 4 o'Clock
BE SURE TO COME IN AND REGISTER FOR YOUR CHURCH SOCIETY
Macon Gas Co.
220 SECOND STREET

FUELS AND THEIR COMBUSTION

This is the title of a comprehensive treatise on the economical utilization of fuels, published by the McGraw-Hill Book Company, and written by Robert T. Haslam, professor of chemical engineering, Massachusetts Institute of Technology, and Robert A. Russell, assistant professor of chemical engineering, Massachusetts Institute of Technology.

The book begins with a discussion of the origin, composition and production of coal, petroleum and natural gas. Special attention is given to the classification of coals, to their storage and the changes that take place in weathering. The coal resources of the world are discussed with particular emphasis on deposits in the United States and Canada. The supply of petroleum is also a matter that is given particular consideration and the future of the petroleum industry is a subject of special interest. Other primary fuels such as shale oil, natural gas, wood, charcoal, etc., are taken up in some detail.

The book then describes in detail typical combustion equipment and discusses the chemistry of combustion. The latter subject is one that is given considerable space in this book and there is an admirable description of the chemical reactions that take place in combustion and the principles on which combustion is based. Numerous calculations are given indicating the application of these principles.

A section of the book is devoted exclusively to the properties and combustion of gaseous fuels, as well as to the details of manufacture of producer gas, water gas, oil gas and coal gas.

There are also three special chapters relating to the flow of liquids and gases, to the flow of heat and to the rate of heating.

All in all, the book is a very excellent contribution to the literature on fuels and their utilization and one which the gas engineer will find of great value in his work.

INDUSTRIAL GAS LESSONS

IF IT'S DONE WITH HEAT — YOU CAN DO IT BETTER WITH GAS

Lesson No. 104

Combustion

What Will Burn?

The next question that arises in this discussion is what materials will burn. We will forget the example of iron and other metals which form oxides either at the ordinary temperature in the air or at high temperatures, and which, strictly speaking, may be considered as "combustion of the metal," and confine ourselves just to those substances which are ordinarily considered as combustible matter. These substances are of three general kinds. They are either solid, as wood, paper or coal; liquid as petroleum or oils of various kinds, or gaseous, as methane, hydrogen, etc.

In general, all fuels are made of three basic elements in various combinations, which elements are known as the combustible elements. These are carbon, hydrogen and sulphur. The compounds of carbon are known as organic compounds and it is a fact that any organic compound will burn, whether it is a fuel or not. Thus the housewife and the cook

WHAT WILL BURN
Organic Substances Burn
Solid Organic Combustible
Coal
Kerosene
Liquid Organic Combustible
Gas
Gaseous Organic Combustible
Inorganic Substances Generally Do Not Burn
Brick is Incombustible and Refractory
Metals, though inorganic in character, will burn; (rust or oxidize)
Three Combustible Elements
HYDROGEN
The lightest substance known, (used in balloons) Will Burn.
CARBON
Coal Burns
SULPHUR
Sulphur Will Burn
Sulphur Match is an example of the use of combustible properties of Sulphur
Broadest Definition of Combustion — includes Union of Substances to form Light and Heat.
Chlorine Gas
Metallic Antimony
Union of Two Elements take place and Evolution of Light and Heat.

know well that food, which is principally organic matter, will burn when overheated. Textiles, cotton, linen, wool, etc., will burn, for they are also organic matter. Flesh will burn, for it is organic matter. There is no organic compound that cannot be raised to a high enough temperature so that it will burn.

Inorganic Non-Combustibles

On the other hand, inorganic compounds are known compounds which do not possess carbon, which do not burn under any circumstances. Thus, a piece of rock may be heated to a very high temperature and may even be melted or liquefied without burning. The heat resistant refractory brick which is used to line furnaces is also a very good example of an inorganic substance that will not burn. However, as has been said before, there are inorganic substances which will unite with oxygen to form oxides. While this may not be considered as combustion in the common meaning of the word, nevertheless, inasmuch as combustion is nothing more than a union of the combustible material with the oxygen in the air to form oxides which are generally—but not always—gases or vapors, oxidation of metals is also a combustion phenomenon. The union of oxygen with inorganic matters to give oxides as, for example, the union of oxygen with iron to give iron rust, yields a solid oxide as a general rule.

Gas in New York State

Excerpts from the 1925 report of the public service commission

THE commission's inspection force has been actively engaged during the year in the inspection of equipment and operation of the various gas plants throughout the State; inspections of gas as to B.t.u. content and purity; and of standards, wet and dry meters. Every plant has been visited and a thorough examination made of the equipment and operation of the various plants. Periodic inspections of gas are made at the various plants by the commission's inspectors, each testing station being visited at least once a month, and in a number of cases twice during the same month. Where a laxity of operation occurs or an infraction of the standards set by the commission is shown by the test results, the matter is immediately called to the attention of the violating corporation. In this manner a very close check is kept on the standard of the product furnished consumers by the various corporations. In the Metropolitan District an even closer check is kept upon the quality of the gas furnished. This is made possible by a larger force and the more compact area to be covered. All of the calorimeters and wet meters used in connection therewith are calibrated at least once every three years, and oftener if necessary. During the current year over 50 per cent of all the instruments in service have been calibrated at the commission's laboratory.

Testing of Meters

As the testing of gas meters is mandatory under the law, this phase of the inspection work is constantly increasing and has passed the point where the present limited meter inspection force is sufficient for the work. In Buffalo particularly, gas meter inspections have increased almost 50 per cent. This is due primarily to expansion by the installation of over 30 miles of new gas mains in that city during the year.

New Plants in Buffalo and in Other Cities

In Buffalo, a new coal gas and blue gas plant, consisting of 40 vertical retorts and three 12-foot blue gas generating machines, has been erected and is now in full operation. This plant is designed to produce a maximum of 15,000 M cu. ft. of gas daily, and will to a great extent solve the difficulties formerly encountered of maintaining proper service and pressure during the season of heaviest demand. In addition to existing equipment in Rochester, a new coal gas unit of 5,000 M cu. ft. per day capacity is being erected.

In Syracuse a new plant has been completed consisting of one unit of 9 benches of vertical retorts, with a capacity of 3,000 M cu. ft. per day. An additional unit of like capacity is now in course of erection and will be completed about July 1, 1926. In Utica, the additional new coal gas unit consisting of a battery of 21 combination coke and gas ovens has been completed and is in full operation.

In Troy, the first unit of the new coke oven gas plant has been completed and is now supplying gas to Albany, Troy, Schenectady and Rensselaer. Gas service in Beacon will be improved by the completion of a new four-inch gas main which has been laid across the Hudson River connecting the Beacon and Newburgh plants. Additional new water gas equipment has been installed at Hudson, Kingston, Rome and Saranac Lake. All of these improvements indicate that the gas industry is rapidly expanding and that a greater demand for gas service is constantly being made.

(Continued on page 81)

As The Journal Views It

GAS COMPANY ADVERTISING

It is of course natural for anyone to advertise himself. It is an essential condition of modern business and of modern society that he, who has a service or a product to sell, reach his prospective public through the medium of advertising. It is acknowledged that there is no way in which this can be done as effectively and with such good results as by the use of publicity media that are afforded the advertiser in any field.

Within recent years it has become customary for large organizations to use ever-increasing space, not only to advertise the products that they manufacture and the service that they have to sell, but also to disseminate certain information that they possess and which may be of great value to the general reading public. The gas companies in this connection—we may say with a great deal of pride and satisfaction—take a premier position. The gas industry has spent a great deal of money, has exerted a great deal of effort in advertising to the public not merely gas and gas appliances but in giving publicity to information which does not have a direct commercial significance.

It is with a great deal of pleasure that we recently read an advertisement in one of the New York papers, in which the gas company is commended for its enterprise and public spirit in spending money to disseminate information of value to its consuming public. We publish this editorial herewith in full.

"Gas company advertising that offers for sale various appliances requiring the use of gas is, of course, of interest to the public. Housewives like to be informed of new devices and improvements in old devices, that make for their convenience and comfort.

"While such advertising is informative, it is, of course, just what is expected of the gas company. No one would think of praising them particularly for doing it. They are merchants selling gas and products incidental to its use, and their advertising is a necessary part of their merchandising plan.

"But when a gas company buys advertising space solely to render a public service, it deserves special attention and public commendation.

"Within the past few days, Home News readers have seen a Northern Union Gas Company message to gas consumers in its territory. It appeared in the advertising columns of this newspaper.

"Instead of asking you to buy something, it tells you how to use gas in such a way as to avert the accidents that its careless use may entail. Instead of telling you how to use more gas, thus adding to the company's receipts, it tells you how to use less gas, and yet get better results in your kitchen.

"A long list of valuable admonitions closes with these words: 'Call your gas company when you want advice and help. Its desire is to serve you efficiently and promptly in all matters pertaining to the use of gas.'

"That sounds like the expression of a sincere intention to serve, and the sincerity is proven conclusively by the very fact of the advertisement's publication."

Of course, it is a fact that such advertising as referred to in the above editorial will eventually redound to the benefit and aggrandizement of the gas company that undertakes it, but it connotes large monetary expenditures and a courage and confidence in the average American community that is highly to be commended. It is merely another means of building good-will, another indication that the gas company of today is an organization dominated by the desire to be of public service—one that demands and deserves the utmost consideration and fair treatment from the public.

MORE THAN ONE-EIGHTH BILLION SPENT ON STORAGE TO KEEP GAS ON TAP

A Billion Cubic Feet on Hand for Emergencies, but It Takes a Sea of Paint to Keep Them in Condition

The storage of manufactured gas for immediate service has cost the gas companies of the United States at least $125,762,670, representing the approximate investment in holder capacity now in use, according to a bulletin of the American Gas Association.

The gas companies spend this money, not in making or distributing gas, nor in any other item of operation, but merely to keep the gas supply ready at all times for any emergency. For this purpose they require a total of 1,143,297,000 cubic feet of holder space.

The amount of storage capacity required is generally based on what is called the maximum day sendout; that is to say, it should be sufficient to hold all the gas produced on the heaviest day of business during the year. This varies according to the temperature, and many companies, through increased consumption, chalk up new records every year. The maximum day sendout is variously estimated at from 1/260 to 1/270 of the total output for the year.

This equality of storage capacity with maximum sendout is adhered to more in theory than in practice, however, for the introduction of the carburetted water gas process, which enables gas making to be carried on almost at will, has helped to keep down the building of holders to the minimum.

The problem of keeping holders in condition is another problem, and one of which the paint industry very largely reaps the benefit. Taking a million cubic feet as the arbitrary size of a small holder, this would mean that there are 1,143 holders in use by the manufactured gas companies alone, each requiring 144 gallons for a coat of paint, or a grand total of 164,592 gallons.

This is only an estimate, however, as there are no figures showing the actual number of holders in use or their individual sizes. Some holders are as big as from ten to fifteen million cubic feet in volume. It would take an ordinary range, with four top burners and two oven burners burning continuously, 5,000 days, or nearly 14 years, to use up all the gas in one of these huge holders when filled.

ADVERTISING GAS

(Continued from page 69)

BLOSSOM TIME

Blossom time and Love! Blossom time and happiness! Blossom time is not the anticipation of Spring, it is the Looking Forward to a revival in nature verified, plus the anticipation of Summer's delights.

In the Fall, in the Winter, when evenings are long and mornings dark, household duties are all the more outstanding, while in Blossom time the harbingers of Spring are a diversion, now missing. Therefore the loving husband should pay especial attention to his family's comfort now that evenings are long and mornings dark. He should not expect or permit his wife or daughter to get a meal on a worn-out, old or dilapidated stove, but secure for her a modern Smoothtop Gas Range, the kind the well-to-do have in the modern kitchen of their swell homes. He should furnish her Automatic hot water, the little "Gastotrol" pushbutton that lights or turns off the tank-heater. And a Radiantfire to dry her hair, warm her back or toast her toes, when seated at the fireplace after a day's work for those she loves. Now is the time to get these things for wifey, now while evenings are long and mornings dark. The Gas Store is at the corner of Fifth and Alder and gladly waits on you whether it be for Cash or on the instalment plan.

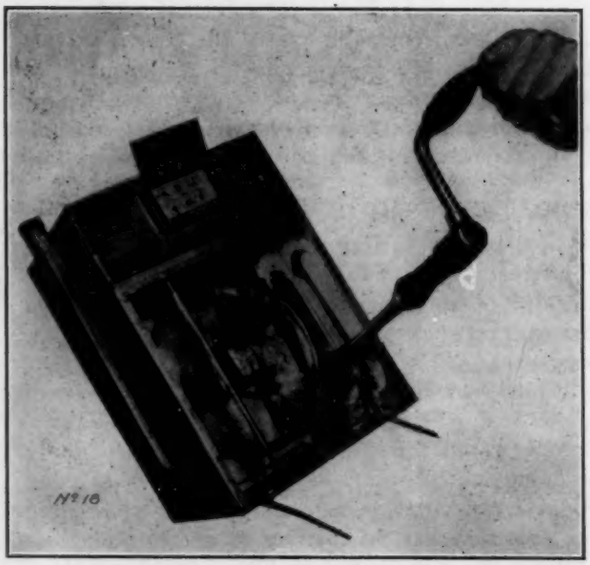
DIAPHRAGM FLANGE REMOVER

Wrinkle No. 18

E. W. Hammond, Pacific Meter Works

THIS device is used by the Portland Gas & Coke Co. to remove the diaphragm flange from a meter after the leather has been taken out. It is made from an ordinary square-shanked bit, built for strength, and slotted at the end for a depth of about two inches. The flange is cut at a point immediately adjoining the diaphragm channel and the slot in the bit placed over it. The bit is then turned with a brace and the flange is rolled up in the same manner as the familiar soldered strip on a pressed meat tin. The remaining circle of solder is then readily removed with a soldering copper. The use of this device considerably speeds up diaphragm removal and minimizes the possibility of damage to the center partition of the meter.

Idea suggested by E. W. Hammond, Pacific Meter Works.



PROGRESS IN GAS TECHNOLOGY
Domestic and Foreign

MODIFIED ORSAT APPARATUS

A DESCRIPTION of the modification of the Orsat apparatus as used in the Bureau of Mines, Department of Commerce, for the analysis of gases, is given in Technical Paper 320, just issued by the bureau.

Many modifications of the original Orsat apparatus for gas analysis are in use at present, each having its merits and being particularly adapted for some special line of work, the bureau points out. The number and the kind of pipettes used depend on the composition of the gas to be analyzed. If ethane is to be determined, in a complex gas mixture containing carbon monoxide, hydrogen, methane and ethane, a copper oxide tube is used for combustion of the hydrogen and carbon monoxide and the cuprous chloride pipettes may be omitted to advantage. If ethane is absent, as in producer and blast-furnace gases, two cuprous chloride pipettes may be used to absorb the carbon monoxide and the copper oxide tube may be omitted.

This paper describes the apparatus used in the Bureau of Mines gas laboratory at Pittsburgh, Pa., for the complete and partial analysis of gases. A complete analysis—including carbon dioxide, illuminants, oxygen, carbon monoxide, hydrogen, methane and ethane—can be made without connecting or disconnecting any parts. Since all other constituents are removed before the paraffin hydrocarbons are burned, larger amounts of paraffins may be often taken for combustion with oxygen, and more accurate determinations of methane and ethane can thus be obtained. The same argument holds true for hydrogen and carbon monoxide, which are determined by fractional combustion with copper oxide at 300 degrees C. Either mercury or water may be used as the confining liquid in the burette, depending on the accuracy desired.

As the Bureau of Mines has received many inquiries regarding gas-analysis methods used in its laboratories, this description of the Orsat apparatus it now uses is published in response to those inquiries.

BEHAVIOR OF LIGNITE BRIQUETTES IN THE GENERATOR

AN interesting article appears in the German magazine Braunkohle, volume 24, pages 373 to 378, on the behavior of lignite briquettes during the gasification process in the producer. The article contains a resumé of various investigations that have been made on this subject, particularly in respect to the maintenance of the form of the briquettes and their crumbling away under the influence of heat. The results obtained from these investigations indicated that the size of the particles, the content of water and ash in the different grades of lignite employed, as well as the results obtained from tumefaction and ultimate analysis offered no basis on which to determine the behavior of the coal. On the other hand, the content of bitumen in the lignite coal seemed to be able to exert a considerable influence on the coking process.

DRY-COOLING HOT COKE MASS

ACCORDING to German patent No. 417,163, the hot coke mass discharged from retort ovens is cooled by a dry cooling process in a heat exchange apparatus. This is accomplished by means of gases or vapors which are kept in constant circulation and which are driven through the mass of hot coke in the heat exchanger. This is effected in such a manner that the mass of coke in the heat exchanger is traversed by the gases or vapors alternately from two opposite sides. In this manner it is possible to effect a very uniform cooling of the coke.

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GAS A FACTOR IN MAKING MILADY'S SMART NEW HAT

When Milady selects a new hat she probably does not know how much she is indebted to gas, says the Pennsylvania Public Service Information Committee.

Gas is used to melt the metal for the aluminum molds. When the straw or felt for the hat is laid upon the lower half of the mold, the upper half, heated by a small gas coil, is brought down upon the lower half. The heat and pressure shapes the fabric to the form desired.

When a "dream" of millinery is given form a gas-fired hatter's iron is used, a method calling for a considerable amount of skill and yielding perfection as its reward.

After a hat has been shaped, it is varnished with glue and dried in a gas-fired drying room. Dyes are heated over gas boilers and the materials used with them are first dyed and starched and then hung in a gas-heated drying oven.

OUTPUT OF GAS HAS INCREASED NINE TIMES IN THE PAST 35 YEARS

STATISTICS at the close of 1925 indicated an extremely bright future for the manufactured gas industry in the United States. Indications are that the full possibilities of the business are yet a long way from realization, although the growth in the use of gas in the past 35 years has been amazing.

In 1924 aggregate sales amounted to over 403,000,000,000 cubic feet, or nine times the amount shown for 1890. By-products have developed rapidly, though not in proportion. Figures for 1925, although yet incomplete, already assure a substantial gain over the 1924 figures.

The character of the industry's market has changed radically. Only about 20 per cent of the total output of gas is now used for lighting, whereas years ago this was practically its sole use. About 30 per cent of the output is now being used in industrial plants. Gas has been adapted to thousands of industrial processes and the number of the latter is growing constantly.

The use of gas for cooking and water heating has developed with incredible rapidity. Today there are approximately 9,800,000 gas stoves, 3,400,000 gas water heaters, and 4,400,000 space heaters in use in the United States. Installation of house heating systems is growing at the rate of about 10,000 per year.

The economies and advantages of gas are responsible for its growth as a heating agent. It is a clean, convenient and controllable heat. It eliminates the expense of fuel storage and does away with many nuisances. It is efficient.

Laclede Gas Light Co. Window Display

INCINERATION

(Continued from page 68)

Composition of Garbage

Analysis shows that city garbage averages from 70 per cent to 80 per cent moisture, about 2 per cent to 3 per cent oils and greases and from 18 to 28 per cent solids, principally wood fibre. The destruction of this material cannot be perfectly accomplished by ordinary coal or coke combustion, but requires fuel emitting intense heat, which action may not be retarded by the presence of foreign matter. Intense heat should be used primarily to evaporate the moisture from the garbage, thus reducing it to combustible form, which will then burn quickly and completely.

With imperfect combustion the mass is liable to throw off an offensive odor, whereas perfect combustion reduces this to a negligible degree.

As a comparison between the heat value of a coal or coke fire and a well developed gas bunsen burner, we might say that a fairly active coal fire might run at the surface from 400 to 500 degrees Fahrenheit, which would have little or no value in burning wet garbage. Furthermore, wet garbage would tend to dampen and very greatly reduce the heat of such a coal fire, whereas a gas flame in a properly constructed gas incinerator immediately reaches a heat of from 1,700 degrees to 1,800 degrees Fahrenheit and maintains this high temperature constantly as long as the gas is lit.

Design of the Gas Incinerator

It is quite obvious, in the building of a gas-burning incinerator, that the design and construction must insure completeness of performance, permanence of service, convenience of operation, and must also be absolutely safe. In other words, it must be well nigh mechanically perfect, capable of economically destroying anything that is at all burnable or else it must finally become a nuisance to every user as well as a commercial failure for the manufacturers.

A detail of prime importance is, of course, the burner, which must be so designed as to be easily and perfectly controlled, yielding a maximum amount of heat, with a minimum expenditure of fuel. It must be so situated as to be practically free from clogging or interference from the material to be destroyed.

The gate system of a gas incinerator should be so designed as to present a maximum surface and should be made of heavy substantial units which can be easily removed and replaced.

The clean-out door should be so situated as to permit of ready approach to all interior parts for examination or cleaning or for the removal of unburnables such as glass or metal, which will at times be unavoidably put into the machine.

Means should also be provided in a gas incinerator to prevent any possible accumulation of unburned gas in the machine, even though the body of the appliance is completely filled with wet garbage.

It Must Be Fool Proof

The perfect gas incinerator, in fact, should be practically as trouble proof as a gas range, should be almost as easy to operate and should last a lifetime. Every feature representing convenience and practical service should not only be built into the design, but should be carefully manufactured so as to prevent trouble and warrant long and continued service.

In considering the opportunities for the distribution of gas incinerators and the assistance which the gas companies can give toward the solution of the waste disposal problem, we might say that the greater field for these machines is, first, in the individual home; second, in apartment houses, in hospitals, schools, dormitories, telephone exchanges, asylums, banks, clubs, municipal buildings, department stores, sanitariums, tuberculosis camps, laboratories and all public institutions.

In the home the use of the gas incinerator represents beyond a doubt the true solution of the garbage question, in that the machine destroys all the household waste in a complete, sanitary and economical manner.

The Household Incinerator

The household gas incinerator should not be confused with any machine which is calculated to perform any other form of service such as heating water, for every feature of the design should be directed toward the one end of waste destruction. Household waste in the properly designed incinerator is reduced to an absolutely sanitary ash of from 2 per cent to 3 per cent of its original bulk and weight.

Any situation that has good flue connections and sufficient gas supply is proper for immediate and efficient installation of a gas incinerator.

In apartment houses attention is already being very considerably directed toward the destruction of waste right on the premises. We are told that apartment house dwellers, in their quest for new quarters, very seriously consider whether the method of waste disposal is clean, convenient and sanitary or whether it is otherwise, thereby becoming a never-ending nuisance and health menace.

The installation of small gas incinerators in each suite represents the utmost refinement and most perfect service, giving to each tenant complete independence regarding waste disposal and freeing him from the exactions of the janitor and the garbage man.

The Incinerator in the Apartment House

This method, however, represents quite an expense and many apartment houses are now installing one or more large gas incinerators in the basement, each

machine being sufficiently large to take care of from 15 to 20 suites. Daily burning of the material results in clean, wholesome premises and gives full assurance of healthy sanitary conditions, with no possibility of unhealthy and unburned accumulations anywhere and no noxious odors either inside or outside the premises.

As a feature in up-to-date hospital design, we believe no detail is at the present time receiving more attention than the method to be employed for the disposing of waste, for to introduce anything for hospital practice relating to the disposal of dressings, surgical waste and the dozen and one other products of the operating room, kitchens, wards, etc., which is primarily incomplete, or fails to absolutely accomplish the purpose, or which leaves a residue which is offensive and many times contagious, is to invite and encourage unsanitary conditions and to create a health menace and a serious condition entirely at variance with desired results.

Every particle of waste originating in and about the institution should be brought into direct contact with intense heat that will preclude the possibility of unburned substances and reduce everything to an absolutely sterile and sanitary ash.

Conditions such as these not only accomplish a splendid physical result, but inspire confidence among convalescents regarding sanitary conditions, thereby promoting improvement in health.

Incineration Prevents Disease

Much consideration is now given to the prevention of breeding places for flies and other filth and disease carrying insects, for epidemics of typhoid, malaria and other diseases have been traced with absolute certainty to these sources. An incinerator prevents this by eliminating the source.

I have seen so many letters that spoke particularly of the value of incinerators in preventing the breeding of flies and other insects that I am tempted to read a few words about flies taken from our sales manual.

Incineration and Flies

Flies and their prevention! A fly is known to carry an average of six million germs, which means that he is creating six million opportunities for sickness. Flies are attracted by left-over foodstuffs and all kinds of waste matter and they have a peculiar propensity for any unsanitary object. Food when first cooked and served is as nearly sanitary as human skill can make it, but if the remaining portions are allowed to stand about they rapidly become unsanitary matter known as garbage. Garbage is one of the most common breeding places for flies, whose numbers under prolific conditions swell to millions in a very short time. Garbage, therefore, should not be allowed to remain in the kitchen of any modern home where the necessity of absolute sanitation is so strongly stressed. In caring for the sick there is nothing so indispensable as the absolute destruction of any object where additional disease germs might originate. With the use of the old-fashioned garbage can this cannot be accomplished, but there is a method in the use of the gas incinerator which will put an end to flies and their habitations by the elimination of their breeding places.

We here at the North are apt to look upon fly crusades with a smile, but I am sure you know that in many sections of our country the fly question is a very serious and vital one, and any agency that can lessen their number is important and valuable. The gas incinerator is therefore now generally considered a vital necessity in hospitals. By its use the methods of collection, disposal and destruction of all waste substance are the most direct, positive, sanitary and complete.

In tuberculosis hospitals we might say that there is an even greater necessity for a perfectly designed gas incinerator than in other institutions.

Incineration and Tuberculosis

Careful research has demonstrated that waste originating in various institutions, particularly in hospitals treating tuberculosis and other infectious diseases, should absolutely be destroyed by fire in order to eliminate the danger of contagion.

It has been found also true that disease germs may not be completely destroyed by the usual method of coal or coke combustion, but retain life and activity, either by passing directly through the flames or by adhering unconsumed to the cinders.

Sanitary science gives us an excellent example of this in the case of the germ bacillus tuberculosis, which requires an intense heat to destroy it, and even when the heat is great enough to thoroughly dry the germ the life still remains and in the form of dust floats in the atmosphere, anywhere and everywhere, until a fertile spot is reached upon some devitalized mortal.

In many of the more progressive and better equipped tuberculosis sanitaria, approved gas incinerators are being used at the present time to destroy the sputum in the cups, whereas the former method was through the medium of the furnace fire. Recent developments along this line have proved most conclusively the value of the gas incinerator method and this fact is cheerfully conceded by health officials in charge.

While these four situations that I have mentioned, namely, individual homes, apartment houses, hospitals and tuberculosis sanitaria, represent the larger field for gas incinerators, yet there are almost countless opportunities elsewhere for installations, for it is a truism that "wherever people congregate, waste accumulates."

Important Selling Points

From the viewpoint of salesmanship and the marketing, it might be well to keep the following salient selling points in mind:

The gas incinerator in the home and apartment houses eliminates forever the ever present nuisance of garbage.

It frees one from the restrictions or requirements of a municipal or any other collection system.

It prevents garbage teams with their noxious odors from stopping near one's home.

It prevents the breeding of flies.

It prevents one's back yard proving a nuisance to neighbors.

It invariably stimulates cleaner and more wholesome back yards. In fact, many times it eliminates the back yard and creates an extension of the front lawn.

It induces one's neighbors to follow the leadership in community betterment.

It prevents, as in some apartment houses, the use of elevator and dumb waiter for food and garbage alike.

Raises Rental Values

It renders apartments more cleanly, thus sustaining the renting value.

It adds a valuable asset to one's apartment house.

It proves a strong attraction to both prospective buyers and tenants.

It makes one's servants more contented and happy because of more convenient and sanitary conditions.

It reduces the labor and expense of janitors.

In hospital practice it represents the most perfect method yet devised, lessening the danger of contagion and insuring complete destruction of all waste.

The Gas Industry's Attitude

Although gas companies throughout the country have never been hostile to the installation of gas incinerators, it must also be said that they have, as far as we have observed, never been particularly anxious to have them, at least not until comparatively recently.

It is perfectly obvious to me, however, that at the present time, for some reason or other, a very considerable interest has been awakened in many gas companies in gas incinerators.

For instance, the vice-president of one of the largest gas companies in the Middle West told me not long ago that he believed that the next great use of gas would be in the direct individual destruction of household and institutional waste.

The sales manager of another large gas company recently said to me, "I have watched your product for ten years. You have been very patient and I now believe that gas incinerators are coming into their own."

Only last week we received a letter from the new business manager of a large Canadian gas company operating a number of gas plants, in which he indicated that he wished to take up this matter of incinerators with us, stating in his letter: "I have always felt that the time would come when this apparatus would be well received by the public."

Interest Is Necessary

These are merely typical of the many expressions that we have had from gas companies within a year, indicating an interest that we never before have observed to any such extent. Why is this? We believe it is simply this:

The gas companies are adopting a broader and wider policy of distribution of gas than ever before. They realize that its use may be encouraged to a very great extent, both industrially and in the home, where it is now used largely in the kitchen range. They realize that it is a splendid idea to teach people generally that wherever heat is required the work may, in the majority of cases, be best accomplished by gas.

The development of many mechanical appliances for the home in recent years has greatly stimulated the use of any kitchen convenience. This tends to lessen sales resistance for incinerators, as well as for other appliances.

It has been argued in times past, and the statement may be more or less true, that the well designed incinerator does not use enough gas to bother with, but incidental to this I feel that almost all of the more progressive gas companies feel exactly this way. In the last analysis it is not the amount of gas that an individual uses, it is the amount of satisfaction he receives, directly or indirectly, through the medium of the gas company.

A very dear friend of mine, now retired, but until two years ago the managing director of the greatest manufactory of its kind in the United States, frequently makes use of this expression: "Never mind the profit, but be sure of your product and be sure of your purpose; the profit will take care of itself."

I believe that, in manufacturing today, the greatest asset is the satisfaction and good will of one's patrons.

GAS IN NEW YORK STATE

(Continued from page 74)

Meter Testing in the Greater City

The greatest problem with respect to gas meter testing is within the Metropolitan District. As an indication of the extent of this task, the following table of meters tested is presented:

1919	324,186
1920	326,999
1921	467,021
1922	514,623
1923	516,304
1924	558,550
1925	502,941

In the upstate district, 159,737 meters were tested.

The use of gas for industrial and house-heating purposes is expanding rapidly. In Utica, Albany, Cohoes, Schenectady, Saratoga Springs and Glens Falls, house-heating rates on very favorable terms are provided, and this business is growing constantly. Industrial rates are now being filed and the indication is that this business will soon become quite heavy.

HARVEY'S UNION STATION LAYOUT A TRIUMPH

(Continued from page 70)

is found the manufacturing or preparation kitchen. There we find a big three-section hotel gas range, and if you don't believe that volume is served from this kitchen, look at the big pan of hash a yard square.

That hash looked most delectable. If it were served on your own table at home, you'd have said that you had a prize cook. Served on the Fred Harvey tables, it is none the less delectable, and they make it by the yard. They can make it by the yard because they have the equipment.

You will find all kinds of modern machinery in this manufacturing kitchen; for instance, the big power potato mixer, 12 big steam kettles, three compartment steamers, a two-section table stove, gas-fired, of course.

Special Cafeteria Equipment

Right off from this manufacturing kitchen, a part of it and yet not a part of it, is a unit, with specially built equipment to serve the safeteria. Here you find steam tables, a short-order stove and one with spot burners and an egg boiler, all built in. Right behind this, of course, are the counters for service with the requisite steam tables and other equipment for quick cafeteria service.

Around the corner is the butcher shop, with tile floors and walls, where five butchers are cutting meat up most of the day. Now we emerge to the "piece de resistance," the bakery, presided over by Baker Chef Frank Weber. Here you find a mammoth gas-fired 90-ton Peterson oven, which is giving such results for heavy duty with gas as the fuel. One section, which is heated by two atmospheric burners consuming 400 feet of gas an hour, is employed for the bread and rolls. The burners are lighted only three hours a day for a 17-hour daily run.

Mammoth Gas-Fired Oven

The other section of the mammoth oven is devoted to pastries. It is of the rotary type and can turn out 500 pies an hour. Mr. Weber closely supervises all of the operations in the bakery himself. "This is a 100 per cent oven," he says. "You don't find an oven heated by any other medium that will do the work that this gas oven will do."

The oven walls are of common brick, 24 to 32 inches thick, and the front is faced with enameled brick. It presents a beautiful appearance, of immaculate white—a flush surface with no crevices to catch dirt.

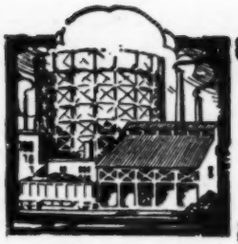
A 90 Ton Gas Fired Bake Oven Gives This Bakery Fame

This 90-ton bake oven is the wonder of the baking fraternity. Its performance is remarkable, first, for the amount of top-notch baking it turns out on a small gas consumption. The economy in use of gas is attributable, first, to burner efficiency, second to insulation.

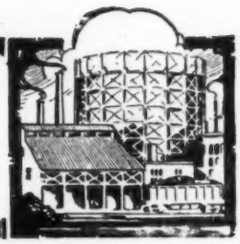
Gas Chosen After Careful Investigation

This gas-fired oven was chosen only after much travel and investigation to determine whether gas or some other fuel would prove most efficient and economical.

Among other up-to-date equipment in the bakery is the flour elevator. The machine starts automatically at the pressing of the button. The baker weighs out on a scale the amount of flour he wants and it is automatically sieved and drops to the mixer, being weighed as it drops. On other scales he weighs out the amount of hot and cold water he wants and gets just the proper amount automatically.



NEWS OF THE GAS INDUSTRY



Own Your Home Exposition to Be Held in Chicago and New York

The connection between insulation and economical heating will be demonstrated at the annual "Own Your Home" expositions to be held in New York City and Chicago early this year. The New York Eighth Annual Exhibition will be held in Tex Rickard's New Madison Square Garden from February 20 to the 27th and the Chicago Sixth Annual Exposition will open in the Coliseum on March 27 and continue until April 3. Central heating equipment will be shown in a facade of a properly insulated house in both cities and large charts will point out the fuel savings possible in the insulated home and the certain losses in the house without this protection.

The Armstrong Cork & Insulation Co. of Pittsburgh will stage the New York display, in co-operation with the Consolidated Gas Co. of that city, and the Universal Gypsum Co. will build the facade in Chicago with the co-operation of the Peoples Gas Light & Coke Co.

The Consolidated Gas Co. of New York City will also show a new type of gas boiler for domestic heating, and the exhibits listed in both cities include all the well known ranges, equipment and appliances.

C. A. Luther, assistant general manager of the Peoples Gas Light & Coke Co., is again chairman of the Chicago Exposition gas appliance committee and has already contracted for more than 30 exhibit booths in the main hall of the Coliseum. N. T. Sellman, of the Consolidated Gas Co. of New York, is chairman of the New York Exposition gas appliances committee.

Portland Gas Employees Awarded Distinctive Buttons

The Portland Gas & Coke Co., Portland, Oregon, has been working for some time on the plan to supply a proper button to its old employees, not perhaps old in years but old as refers to number of years employed by the company.

The other evening 125 of them were invited by President Guy W. Talbot to meet for dinner, and the attractive button, in the center of which is the number of years, commencing with 10 and advancing by units of 5, was handed out by the vice-president and general manager Hilmar Papst, and 125 employees went away that evening feeling more pride than ever in, and more loyalty than ever, if such a thing is possible, to the Portland Gas & Coke Co.

Charles F. Adams, now vice-president of the First National Bank, but still chairman of the board of directors of the Portland Gas & Coke Co., entertained the audience with reminiscences of the company, which began operations in Portland 66 years ago. Mr. Adams was for many years president of the company.

At the top of the list was L. Sexton, who has been with the company consecutively for 49 years. Second is Peter Parisi, who has been with the gas company for 43 years. Both of these are now nominally retired and draw pensions from the company.

The remaining 875 members who did not sit down to the dinner are looking forward to the day when they will bear the emblem of faithful service.

Illinois Gas Men to Meet in March

The sixth joint convention of the Electric, Gas & Electric Railways Associations will be held in Springfield, Illinois, on Wednesday and Thursday, March 17 and 18, 1926.

A program of state-wide interest to every branch of the utility industry is being prepared. As in the past years, there will be joint morning sessions and separate afternoon sessions for each association. On one evening there will be an entertainment program and the other an educational program, details of which will appear in the convention program which will be available about March 1.

Joint sessions—9:30 a. m., Hotel Abraham Lincoln.

Afternoon sessions—2:00 p. m.: Electric Association sessions; St. Nicholas Hotel; Gas Association sessions, Leland Hotel; Railway Association sessions, Hotel Abraham Lincoln.

Bill on Unclaimed Gas Deposits in N. Y. Legislature

A bill has been introduced into the New York Legislature relating to disposition of unclaimed deposits, as follows:

"Whenever a deposit made as required in the preceding section shall have been unclaimed for a period of five years after such corporation has ceased to supply gas or electricity to the person making such deposit, the corporation shall turn over such deposit, together with the legal interest thereon, to the State Comptroller. The Comptroller shall hold the same in a fund and shall pay the same to such persons as establish a right thereto, if such claim be made within five years after such

moneys have been turned over to such Comptroller. If no claim be made within such term of five years, the Comptroller shall pay such moneys into the State treasury.

"This act shall take effect immediately."

E. A. Munyan Changes Position

The Logan County Coal Corporation, owners and operators of large coal properties in Logan County, West Virginia, and with sales headquarters in Cincinnati, have just announced that E. A. Munyan, formerly purchasing agent for the Northern Indiana Gas & Electric Co. and other affiliated Insull properties, has joined their organization as a sales engineer.

Mr. Munyan has for some time been affiliated with public utility enterprises, having started with

E. A. Munyan

the United Gas Improvement Co. of Philadelphia while completing his college course in engineering at the University of Pennsylvania. After completion of his education, he was connected with the E. I. duPont de Nemours & Co. at Hopewell, Virginia. During the World War he served as a lieutenant (junior grade) in the United States Navy on inspection duty under the Bureau of Ordnance. After the war Mr. Munyan associated himself with the United Gas Improvement Co. and served in various capacities, from cadet engineer to superintendent, at their Syracuse, New York, Allentown, Pennsylvania, and Michigan City, Indiana, plants. In 1922, after the Insull interests took over the Northern Indiana Gas & Electric Co., Mr. Munyan was in charge of the investment department of his company on sales work and was then promoted to purchasing agent for his company at Hammond, Indiana. Here he had charge of all purchasing for his company and affiliated companies and has a wide acquaintance among manufacturers and their representatives.

METER READER MAKES MAGAZINE SECTION

Has Walked Around the World Five Times, Yet Has Not Been Out of Town

St. Louis, Mo.—The feature section of the East St. Louis, Illinois, Daily Journal for Sunday, January 10, contains the following story about Henry C. Buhs, gas meter reader extraordinary, under the heading: "Henry, the Gas Man, Walks Around the World Five Times, but Sees Only East St. Louis."

"Henry C. Buhs has walked around the world five times in 21 years and all he has seen is East St. Louis.

"You see, Henry was a gas meter reader, not an ordinary reader, mind you, but one of the best and most accurate in the United States.

"Ask any one of 4,500 gas users if they know Mr. Buhs and they will reply, 'Mr. Buhs? Mr. Buhs? No, I don't think I do.'

"Then ask them, 'Do you know Henry, the gas man?' and their face will light up and the reply will be, 'I sure do; he's read our gas meter for years.'

"Mr. Buhs and 'Henry, the gas man,' are one and the same.

"Henry has been in the employ of the Illinois Power & Light Cor-

poration and its predecessor for 22 years.

"Henry read gas meters for more than 20 years and today he is head of the meter readers for the Illinois Power & Light Corporation in East St. Louis.

"Every month he called upon 4,500 customers and to every one of the 4,500 Henry had a pleasant 'Howdy' and a pleasant 'Good Day.'

"In 1,000 readings, his average is only one mistake—an average of 1/10 of 1 per cent.

"His working day consisted of eight hours. His jaunt, as he calls it, began at 7:30 a. m. He took an hour for lunch and then walked again until 4 o'clock and was in the company's office by 4:30 o'clock in the afternoon.

"When Henry first started reading meters he had one man to help him. Later when more customers were added another man was taken on and today the work is so heavy that four men do nothing but read gas meters in East St. Louis.

"Henry found that at certain times of the year it was difficult. Celebrations down town, Christmas shopping and other factors often made it necessary for him to return and read the meters at a later date, but, as a rule, Henry has found that East St. Louis women are not globe trotters and stay at home during the day.

"Often Henry itches to get out again and 'hit the ball' as he calls it, but his reading days are over.

"He has a record that will stand for a long time, it is believed, and one that can't be topped without a motor car, he believes."

Lee Holtz Appointed Assistant Superintendent

Lee Holtz has been appointed assistant superintendent of distribution for the Southern California Gas Company. Mr. Holtz has been in that organization for the past five years and a half and previous to his coming to California he had wide experience in the natural gas industry of the Middle West, principally in Kansas.

Before assuming his duties as assistant to C. D. Bell, superintendent of distribution for the Southern California Gas Company, Mr. Holtz was in charge of the combustion engineering work for that company. Many industrial firms of Southern California have had their fuel problems investigated and solved by him.

Central Hudson Merger Approved

Albany, N. Y.—The Public Service Commission has authorized the Central Hudson Gas & Electric Co. of Poughkeepsie to acquire the outstanding capital stock of the Citizens Railroad, Light & Power Co. and Southern Dutchess Gas & Electric Co., of Beacon, and the Fishkill Electric Railway Co. Authority was given to merge the Southern Dutchess and Citizens companies with the Central Hudson.

Consent was also granted to John L. Wilkie to transfer to the Central Hudson Company certain lands in the towns of Fishkill and East Fishkill held by him and used in connection with the operation of the Citizens Railroad, Light & Power Co.

The Public Service Co. of Colorado in 1925

Denver, Col.—The Public Service Company of Colorado is growing, and growing fast, and this refers to the gas department as well as its electrical plant. Every modern home that gets electricity for lights is ordering gas for cooking, many for all purposes when heat is thought of. During the year 1925 the average payroll jumped from $229,000 to $231,000. It paid out more than $10,500,000 for various purposes, more than $3,000,000 being in salaries to its 4,150 employees. When the year 1925 ended it was found that there were 70,451 gas meters in service, the electrical meters being 79,175, but all signboards and steam-heated office buildings must have electrical meters, hence it is that the race of gas and electricity will be seen as a very even affair, neither commodity dispensable in the home, if homey conditions are wanted, and they are wanted.

If there is a better way to "do it," then that's what the company is after, and toward that end much money has been and will be spent. It must be public service in deed as well as name.

45% of Gas Co.'s Stockholders Women

Darby, Pa.—The Empire Gas & Electric Co., of Geneva, N. Y., reported to officials of the American Gas Association recently that, of its entire stockholder list of 2,000 names, 866 were found to be women.

Of that number, 597 were women who run their own homes. Similar figures, indicative of the wide distribution of gas company securities, were quoted from other sections of the country.

Rate Dispute Bill in New York Assembly

Albany, N. Y.—Under the provisions of a bill introduced in the Assembly by Mr. Reidy, Democrat, of Brooklyn, a new section, 20-a, is added to the Public Service Commission Law, providing in proceedings involving rates for gas or electricity, any city whose residents are affected shall be the proper party and may institute proceedings.

A companion measure by Mr. Auleta, Democrat, of New York, adds new section to the civil practice act, authorizing any city to institute proceedings involving rates or service of any gas or electric company operating in whole or in part of such city and making a city in actions not instituted by it a proper party thereto.

J. C. Groble Sells Interest in Reynolds Gas Regulator

J. C. Groble, who has been associated for the past 20 years with both the natural and artificial gas industry, and who has been president and general manager of the Reynolds Gas Regulator Co. for nine years, has sold his interest in the company to Myron B. Reynolds. Mr. Groble has been actively engaged in the gas business in the technical end, having been chief engineer for the Indianapolis Gas Co. and chief engineer and superintendent for the Elwood Gas Co., Elwood, Indiana, as well as chief engineer and superintendent for the Anderson Gas Co. at Anderson, Indiana.

Mr. Groble will shortly enter the consulting engineering field, making a specialty of distribution systems and all kinds of pressure regulation.

Northern States Sales Department Completes Successful Year

Chicago, Ill.—Electric and gas appliance sales totaling $1,142,299 are reported for Northern States Power Company for the year 1925 by H. E. Young, sales manager of the company. Electric and gas appliances to the number of 28,708 were sold. Since these appliances include only those sold by the Northern States Power Company, and other dealers are equally active, it will be seen that these sales represent only a part of the total purchases of appliances by users of electricity and gas in the territories served by the company. They serve to show, however, the extent to which the public is turning in the adaptation of mechanical appliances to the needs of the modern home.

The demand for modern lighting facilities in stores and factories continues to increase as the result of the company's activities in this field. Participation in the national industrial lighting campaign under the auspices of the National Electric Light Association is considered partly responsible for the excellent showing made. In the Minneapolis division alone more than 1,000 installations were completed, improved or remodeled during the year.

N. Y. State Gas & Electric Co. Acquires Utilities

The Public Service Commission has made final orders in 10 separate proceedings by which the New York State Gas and Electric Corporation, a subsidiary of the Associated Gas and Electric Company, has had 10 New York utility properties transferred to it by deed.

The utilities transferred are the Southern New York Power Company, Madison Power Company, Inc., Sullivan County Light and Power Company, Waterville Gas and Electric Company, Delaware County Electric Light and Power Company, New Berlin Light and Power Company, Fleischmanns Light, Heat and Power Company, Moravia Electric Light and Power Company, West Branch Light and Power Company and the Steven O'Connor electrical plant.

These properties are in territory contiguous to that served by the Gas and Electric Corporation and were connected with the corporation's system pending the proceedings for their acquisition. Numerous hearings on the proposal to include the properties in the Associated's system were held by the Public Service Commission, which found that the inclusion would be in the public interest.

Northern States Company Takes Over St. Paul Properties

Northern States Power Company has formally taken over the recently acquired properties of the St. Paul Gas Light Company, when officials of the latter company turned over their records to R. F. Pack, vice-president and general manager of the Northern States company.

Mr. Pack stated that the combined offices of the company would be located in the building of the St. Paul Gas Light Company.

G. O. House, manager of the St. Paul division of the Northern States company, will be manager of the combined systems in St. Paul.

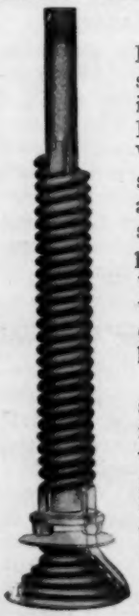
Wisconsin Public Service Corp. Bonds Offered

Chicago, Ill.—Offering has been made by a syndicate headed by H. M. Byllesby & Co. and Halsey, Stuart & Co., of an issue of $3,938,000 Wisconsin Public Service Corporation first lien and refunding mortgage 5½ per cent gold bonds, series B. The price was 99 and interest, yielding the investor over 5.55 per cent, and the issue was largely oversubscribed.

Net earnings of the properties for the 12 months ended November 30, 1925, amounted to more than twice the annual interest requirements on the total funded debt of the company, including divisional bonds, to be outstanding with the public on completion of the present financing.

The properties of the company are under the management of the Byllesby Engineering and Management Corporation, the entire capital stock of which is owned by Standard Gas & Electric Company.

Indirect Water Heating Principle



The Niagara Water Heater Co., Buffalo, show in a booklet the interior coil of the Birtch "Indirect" Gas Water Heater. They state this revolutionary principle of construction has made possible the "indirect" type of heater — the water in the heating coils never leaves the heater.

It rises by thermo-syphon movement into one of the interwoven radiating coils, giving off a portion of its heat as it passes upward. These radiating coils are immersed in the tank of water to be heated. At the top of its rise the water passes into the second radiating coil and gives up the balance of its heat as it descends.

Minneapolis Gas Company Plans Extension

Minneapolis, Minn. — Increased plant capacity and a curtailment in production costs, with a continuation of main extension work begun in 1924 stand out as the major projects in the Minneapolis Gas Light Company's tentative 1926 extension and improvement program.

Drafting the program was begun at a conference of officers and directors with J. B. Klumpp, Philadelphia member of the board, chief engineer of the United Gas Improvement Company, and eastern representative of the Minneapolis corporation.

Since the company's rate agreement last year with the City Council, hundreds of miles of trunk and service lines have been laid. A major part of the company's 1926 activities will be devoted to a furtherance of this work, A. H. Rand, president, said.

The company today is serving more than 110,000 customers, as against 70,000 five years ago, and the consequent increase in the demand for gas will make enlargement of manufacturing capacity imperative, he added.

Gas Men Quickly Oversubscribe to Gas Bonds

Brooklyn, N. Y.—The offer of the Brooklyn Union Gas Co. 10-year 5½ per cent convertible debenture bonds to the employees of the company was oversubscribed by about twice the amount offered. The subscriptions closed yesterday at noon and a tabulation shows that more than 3,100 employees took advantage of the privilege given them, their total subscriptions amounting to over $1,000,000 par value of bonds.

These 3,100 subscribers represented all the departments of the Brooklyn Union Gas Company system. Employees were given the privilege of paying for their subscriptions in one payment or on the deferred payment plan.

In order to make the fullest possible distribution, all who subscribed for $100, $200 or $300 of bonds were allotted the full amount. Approximately 800 of the employees subscribed in amounts over $300 and they were conditionally allotted bonds up to a total of $500.

These bonds are convertible at the expiration of three years into two shares of stock for each $100 bond, thereby giving the opportunity to the employee to become a permanent stockholder in the company.